

APPENDIX A

A.7.3 Water Quality and Sources for Bacteria

Historical bacteria monitoring data that is available for wet weather events was limited to the SD8(1) site. The wet weather bacteria parameters are not illustrated since only this one monitoring station has bacteria results. Also, this site has consistently exceeded the Basin Plan WQO for REC-2 of 4000 MPN/100mL for fecal coliform during wet weather events (based on 10% of any samples collected during any 30-day period). The Chollas Creek Watershed is listed in the Basin Plan as a potential REC-1 beneficial use, but since it is not designated REC-1, the watershed is compared to the REC-2 water quality objective.

Due to limited wet weather monitoring data as mentioned above, only results from the dry weather monitoring events were plotted to show the spatial variability of concentrations for total coliform, fecal coliform, and enterococcus (Figure 22, Figure 23, and Figure 24 respectively). Using the address and GPS data from the BLTEA Inventory of Sources, the locations of these potential sources are presented in Figure 25. It is evident that levels above the dry weather action levels for total coliform, fecal coliform, and enterococcus occur throughout the watershed, but that some areas indicate more consistently higher bacteria levels. These areas appear to be located in the upper, western drainage areas of the Chollas Creek Watershed and near the base of the watershed.

A.7.4 Water Quality and Sources for Pesticides

Pesticide analysis has been primarily focused on the organophosphate class of pesticides and primarily on Diazinon and Chlorpyrifos. The historical mean Diazinon concentrations and potential pesticide sources are shown in Figure 26. Higher mean concentrations of Diazinon are apparent in the south fork as compared to the upper northwestern drainage area to the north fork of the Chollas Creek Watershed. Diazinon concentrations have significantly decreased at SD8(1) (northern drainage area) and have not been detected above the water quality objectives over several wet weather monitoring seasons.

Dry weather monitoring results have indicated that Diazinon and Chlorpyrifos are typically detected below the dry weather action level and do not frequently require follow up investigations. The concentrations and use of organophosphate pesticides is decreasing.

The potential source locations for pesticides in the Chollas Creek Watershed are presented in Figure 27. It is apparent that the majority of the potential pesticide source types occur in the upper reaches of both drainage areas and near the base of the watershed.

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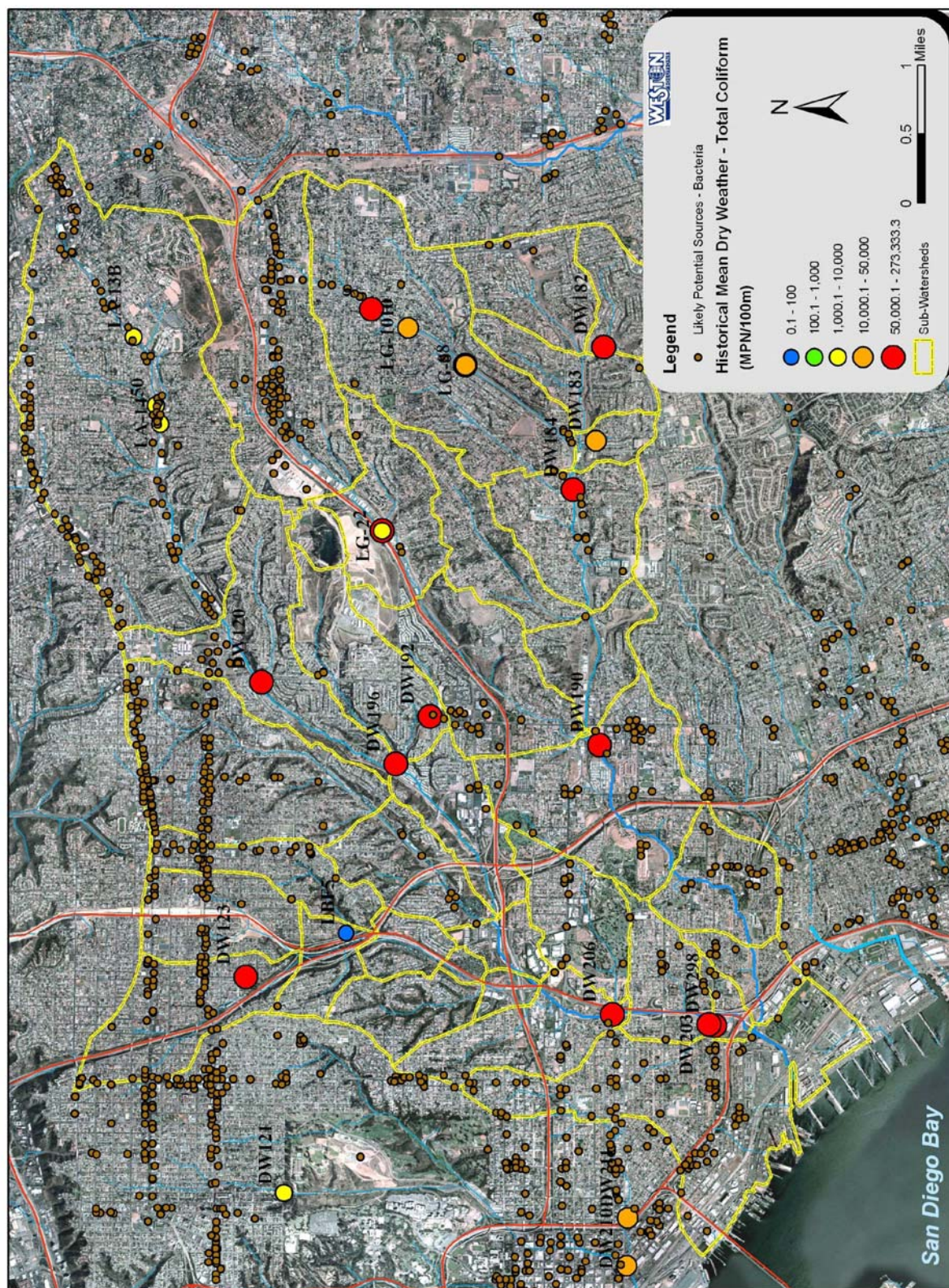


Figure 22. Historical (2002-2005) Mean Dry Weather Results for Total Coliform in Chollas Creek Including Potential Bacteria Source Locations (BLTEA, 2005)

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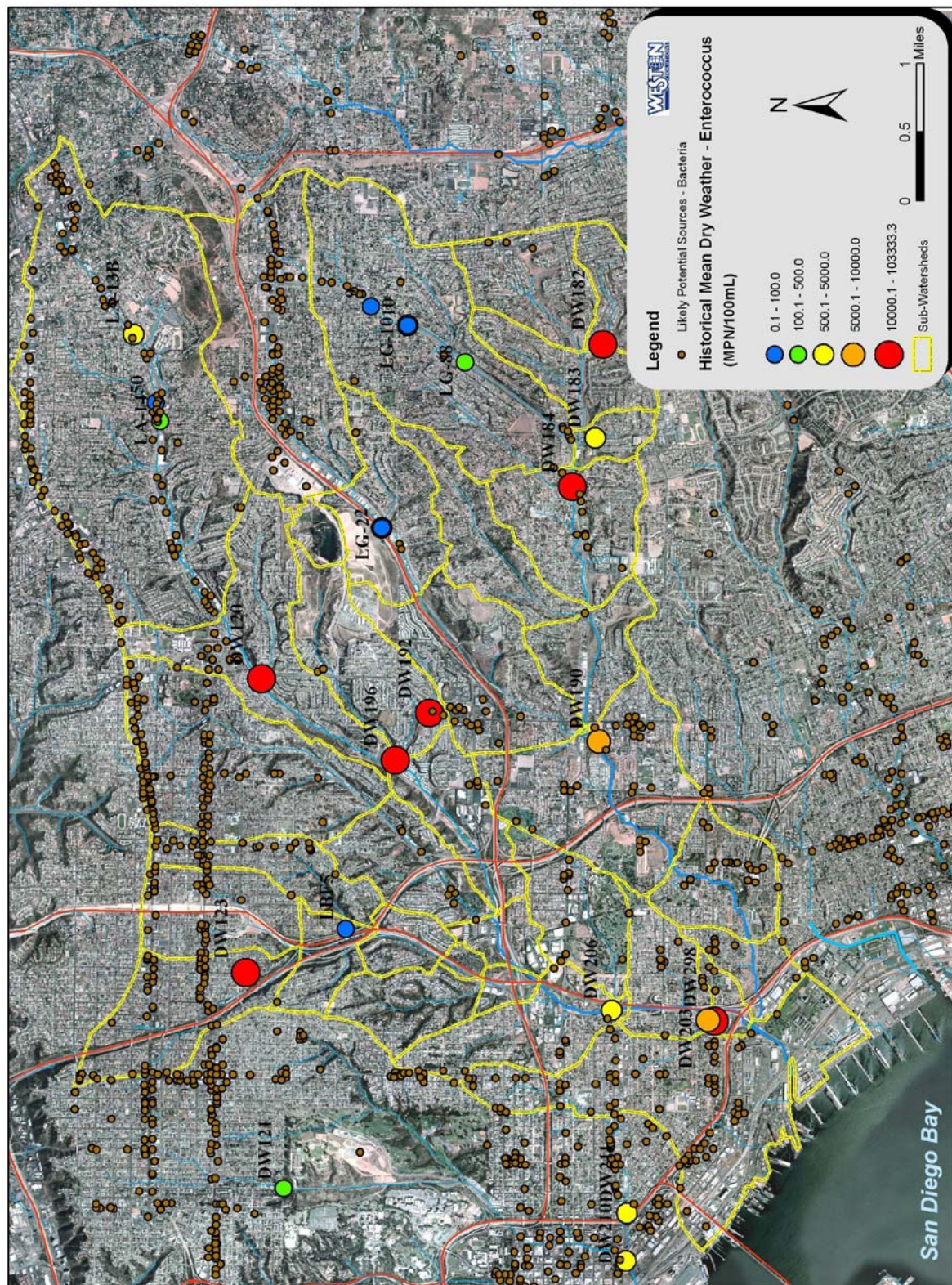


Figure 24. Historical (2002-2005) Mean Dry Weather Results for Enterococcus in Chollas Creek Including Potential Bacteria Source Locations (BLTEA, 2005)

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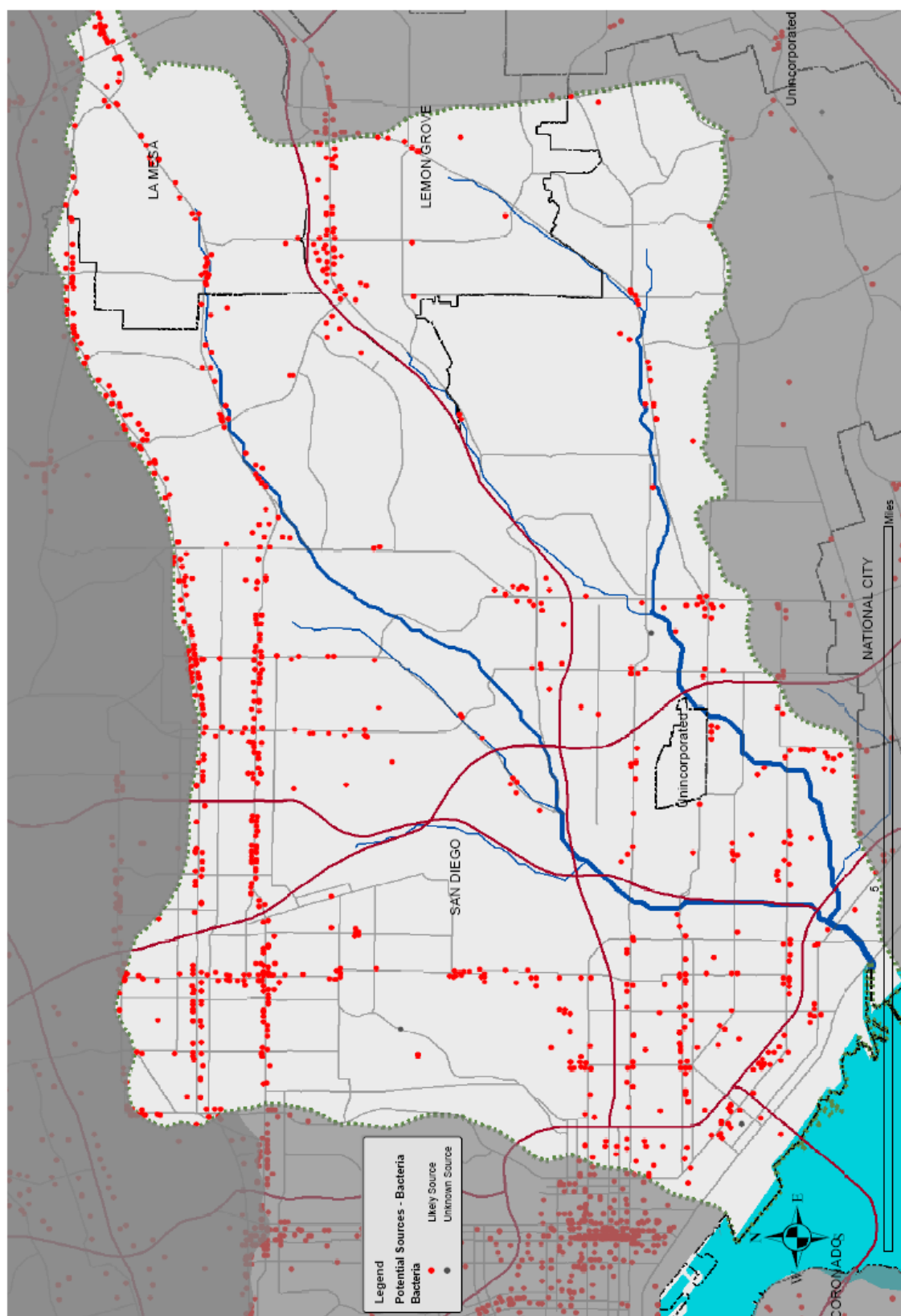


Figure 25. Potential Bacteria Source Locations in the Chollas Creek Watershed (BLTEA, 2005)

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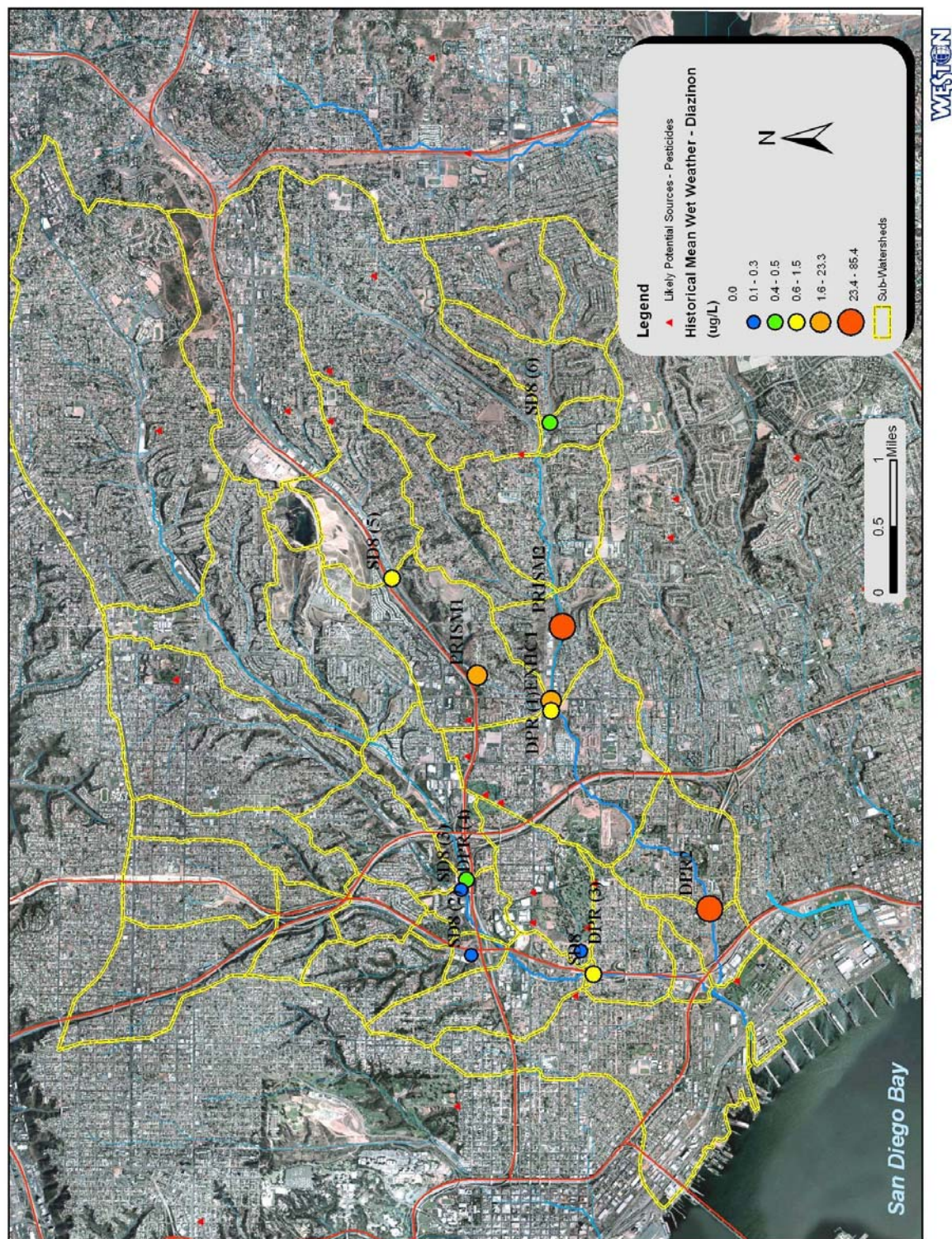


Figure 26. Historical (2002-2005) Mean Wet Weather Results Diazinon in Chollas Creek Including Potential Pesticide Source Locations (BLTEA, 2005)

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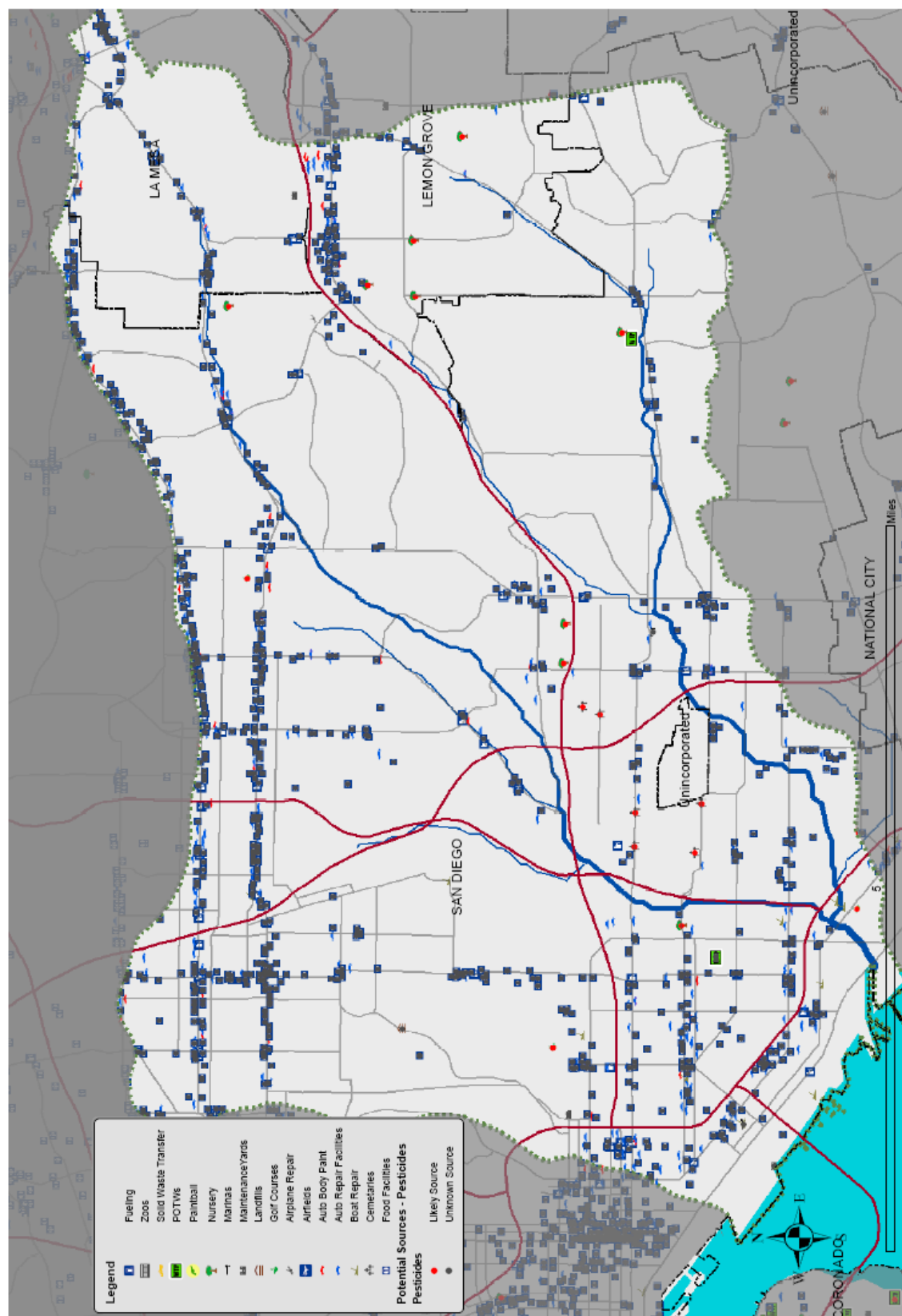


Figure 27. Potential Source Types for Pesticides in the Chollas Creek Watershed (BLTEA, 2005)